

ABSTRACT FINAL ID: SM53A-02;

TITLE: Observations and Interpretation of Magnetofluid Turbulence at Small Scales (*Invited*)

SESSION TYPE: Oral

SESSION TITLE: SM53A. Multiscale Turbulence and Stochastic Wave-Particle Interactions in Planetary Magnetospheres II

AUTHORS (FIRST NAME, LAST NAME): Melvyn L Goldstein¹, Fouad Sahraoui²

INSTITUTIONS (ALL): 1. Geospace Physics Laboratory, NASA Goddard SFC, Greenbelt, MD, United States.

2. Laboratoire de Physique des Plasmas, CNRS-Ecole Polytechnique, Paris, France.

Title of Team:

ABSTRACT BODY: High time resolution magnetic field measurements from the four Cluster spacecraft have revealed new features of the properties of magnetofluid turbulence at small spatial scales; perhaps even revealing the approach to the dissipation regime at scales close to the electron inertial length. Various analysis techniques and theoretical ideas have been put forward to account for the properties of those measurements. The talk will describe the current state of observations and theory, and will point out on-going and planned research that will further our understanding of how magnetofluid turbulence dissipates. The observations and theories are directly germane to studies being planned as part of NASA's forthcoming Magnetospheric Multiscale Mission.

KEYWORDS: [2772] MAGNETOSPHERIC PHYSICS / Plasma waves and instabilities, [2772] MAGNETOSPHERIC PHYSICS / Plasma waves and instabilities, [7863] SPACE PLASMA PHYSICS / Turbulence.

(No Image Selected)

(No Table Selected)

SPONSOR NAME: Melvyn Goldstein

Additional Details

Previously Presented Material: 25% IPELS

Contact Details

CONTACT (NAME ONLY): Melvyn Goldstein

CONTACT (E-MAIL ONLY): melvyn.l.goldstein@nasa.gov